

FORM PTO-1390 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER: P.19153
		U.S. APPLN. NO. (If known, see 37 CFR 1.61) 09/831,026
INTERNATIONAL APPLICATION NO.: PCT/ZA99/00090	INTERNATIONAL FILING DATE: 16 SEPTEMBER 1999	PRIORITY DATE CLAIMED: 4 NOVEMBER 1998
TITLE OF INVENTION: FLUID APPLICATOR ENGAGEMENT DEVICE		
APPLICANT(S) FOR DO/EO/US: Francois Jacobus ROSSOUW		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
1. <input checked="" type="checkbox"/>	This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.	
2. <input type="checkbox"/>	This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.	
3. <input checked="" type="checkbox"/>	This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).	
4. <input checked="" type="checkbox"/>	A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.	
5. <input checked="" type="checkbox"/>	A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ul style="list-style-type: none"> a. <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> has been transmitted by the International Bureau. (see attached copy of PCT/IB/308) c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). 	
6. <input type="checkbox"/>	A translation of the International Application into English (35 U.S.C. 371(c)(2)).	
7. <input type="checkbox"/>	Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)). <ul style="list-style-type: none"> a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> have been transmitted by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input type="checkbox"/> have not been made and will not be made. 	
8. <input type="checkbox"/>	A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).	
9. <input checked="" type="checkbox"/>	An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).	
10. <input type="checkbox"/>	A translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).	
Item 11. to 16. below concern document(s) or information included:		
11. <input checked="" type="checkbox"/>	An Information Disclosure Statement under 37 CFR 1.97 and 1.98.	
12. <input type="checkbox"/>	An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.	
13. <input checked="" type="checkbox"/>	A FIRST preliminary amendment.	
14. <input type="checkbox"/>	A SECOND or SUBSEQUENT preliminary amendment.	
15. <input type="checkbox"/>	A substitute specification.	
16. <input checked="" type="checkbox"/>	A change of power of attorney and/or address letter.	
16. <input type="checkbox"/>	Other items or information:	
International Search Report PCT/IPEA/409 Abstract of the Disclosure on a Separate Sheet Application Data Sheet		

U.S. APPLICATION NO. (Unknown, 37 CFR 1.51) 09/831026		INTERNATIONAL APPLICATION NO. PCT/ZA99/00090	ATTORNEY'S DOCKET NO. P.19153																																																																																											
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<p>17. <input checked="" type="checkbox"/> The following fees are submitted:</p> <p>BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5)):</p> <p>Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$ 1,000.00</p> <p>International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$ 860.00</p> <p>International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$ 710.00</p> <p>International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$ 690.00</p> <p>International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$ 100.00</p>																																																																																														
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<table border="1"> <thead> <tr> <th>CLAIMS</th> <th>NUMBER FILED</th> <th>NUMBER EXTRA</th> <th>RATE</th> <th>\$</th> </tr> </thead> <tbody> <tr> <td>Total claims</td> <td>24 - 20 =</td> <td>4</td> <td>X \$18.00</td> <td>\$ 72.00</td> </tr> <tr> <td>Independent claims</td> <td>1 - 3 =</td> <td>0</td> <td>X \$80.00</td> <td>\$</td> </tr> <tr> <td colspan="3">MULTIPLE DEPENDENT CLAIMS(S) (if applicable)</td> <td>+ \$270.00</td> <td>\$</td> </tr> <tr> <td colspan="4">TOTAL OF ABOVE CALCULATIONS =</td> <td>\$ 932.00</td> </tr> <tr> <td colspan="4">Reduction of $\frac{1}{2}$ for filing by small entity, if applicable. Applicant claims Small Entity Status under 37 CFR 1.27.</td> <td>\$ 466.00</td> </tr> <tr> <td colspan="4">SUBTOTAL =</td> <td>\$ 466.00</td> </tr> <tr> <td colspan="4">Processing fee of \$130 for furnishing the English translation later than months from the earliest claimed priority date (37 CFR 1.49(f)).</td> <td>\$</td> </tr> <tr> <td colspan="4">TOTAL NATIONAL FEE =</td> <td>\$ 466.00</td> </tr> <tr> <td colspan="4">Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property+</td> <td>\$</td> </tr> <tr> <td colspan="4">TOTAL FEES ENCLOSED =</td> <td>\$ 466.00</td> </tr> <tr> <td colspan="4"></td> <td>Amount to be refunded:</td> </tr> <tr> <td colspan="4"></td> <td>charged:</td> </tr> <tr> <td>a. <input checked="" type="checkbox"/></td> <td colspan="4">A check in the amount of \$ <u>466.00</u> to cover the above fees is enclosed.</td> </tr> <tr> <td>b. <input type="checkbox"/></td> <td colspan="4">Please charge my Deposit Account No. 25-0120 in the amount of \$ to cover the above fees. A duplicate copy of this sheet is enclosed.</td> </tr> <tr> <td>c. <input checked="" type="checkbox"/></td> <td colspan="4">The Commissioner is hereby authorized to charge any additional fees which may be required by 37 CFR 1.16 and 1.17, or credit any overpayment to Deposit Account No. 25-0120. A duplicate copy of this sheet is enclosed.</td> </tr> <tr> <td colspan="5"> SEND ALL CORRESPONDENCE TO: Customer No. 000466 YOUNG & THOMPSON 745 South 23rd Street 2nd Floor Arlington, VA 22202 (703) 521-2297 facsimile (703) 685-0573 </td> </tr> <tr> <td colspan="5" style="text-align: right;"> By <u>Benoît Castel</u> Benoît Castel Attorney for Applicant Registration No. 35,041 </td> </tr> </tbody></table>					CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$	Total claims	24 - 20 =	4	X \$18.00	\$ 72.00	Independent claims	1 - 3 =	0	X \$80.00	\$	MULTIPLE DEPENDENT CLAIMS(S) (if applicable)			+ \$270.00	\$	TOTAL OF ABOVE CALCULATIONS =				\$ 932.00	Reduction of $\frac{1}{2}$ for filing by small entity, if applicable. Applicant claims Small Entity Status under 37 CFR 1.27.				\$ 466.00	SUBTOTAL =				\$ 466.00	Processing fee of \$130 for furnishing the English translation later than months from the earliest claimed priority date (37 CFR 1.49(f)).				\$	TOTAL NATIONAL FEE =				\$ 466.00	Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property+				\$	TOTAL FEES ENCLOSED =				\$ 466.00					Amount to be refunded:					charged:	a. <input checked="" type="checkbox"/>	A check in the amount of \$ <u>466.00</u> to cover the above fees is enclosed.				b. <input type="checkbox"/>	Please charge my Deposit Account No. 25-0120 in the amount of \$ to cover the above fees. A duplicate copy of this sheet is enclosed.				c. <input checked="" type="checkbox"/>	The Commissioner is hereby authorized to charge any additional fees which may be required by 37 CFR 1.16 and 1.17, or credit any overpayment to Deposit Account No. 25-0120 . A duplicate copy of this sheet is enclosed.				SEND ALL CORRESPONDENCE TO: Customer No. 000466 YOUNG & THOMPSON 745 South 23rd Street 2nd Floor Arlington, VA 22202 (703) 521-2297 facsimile (703) 685-0573					By <u>Benoît Castel</u> Benoît Castel Attorney for Applicant Registration No. 35,041				
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Francois Jacobus ROSSOUW

Serial No. (unknown)

Filed herewith

FLUID APPLICATOR ENGAGEMENT DEVICE

PRELIMINARY AMENDMENT

Commissioner for Patents

Washington, D.C. 20231

Sir:

Prior to calculation of the filing fee, please substitute Claims 1-4 as originally filed, with Claims 1-4 as filed in the Article 34 amendment of December 14, 2000. The pages containing Claims 1-4 are marked "AMENDED SHEET" and are attached hereto. Following the insertion of Claims 1-4, please amend these claims as follows:

IN THE CLAIMS:

Amend claim 4 as follows:

--4. (Amended) A device as claimed in claim 1, wherein the support is of larger cross sectional dimension than the axial length of the fluid applicator with which it is to be used, said support being adapted to float at or on the surface of the fluid with the fluid applicator engaging means at or just below the surface of the fluid.

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Amend claim 5 as follows:

--5. (Amended) A device as claimed in claim 1, wherein, in the case of the fluid applicator being a roller, the support and fluid applicator engaging means are adapted so that the roller can be rolled over at least part of the fluid applicator engaging means to bring it in contact with the fluid in the container.

Amend claim 6 as follows:

--6. (Amended) A device as claimed in claim 1, wherein the fluid in the container is a coating composition, such as paint, and the roller picks up the paint onto its applicator surface by the action of rolling it over the fluid applicator engaging means and the fluid surface.

Amend claim 8 as follows:

--8. (Amended) A device as claimed in claim 6, including a centre piece defining the opening and connected to the support by the arms.

Amend claim 9 as follows:

--9. (Amended) A device as claimed in claim 7, wherein the arms are made of a flexible material, the length of the arms determining the freedom of movement of the centre piece relative to the support.

Amend claim 10 as follows:

--10. (Amended) A device as claimed in claim 7, wherein the arms are made of a resiliently deformable material.

Francois Jacobus ROSSOUW

Amend claim 12 as follows:

--12. (Amended) A device as claimed in claim 8, wherein the centre piece comprises the stirrer element opening.

Amend claim 13 as follows:

--13. (Amended) A device as claimed in claim 7, wherein the fluid applicator engaging means is in the form of projections provided on the arms and configured to engage the fluid applicator.

Amend claim 14 as follows:

--14. (Amended) A device as claimed in claim 1, wherein the support is of inverted channel-shape section to assist it to float.

Amend claim 15 as follows:

--15. (Amended) A device as claimed in claim 7, wherein support and/or the arms and/or the centre piece have an axially directed lip or flange to increase the fluid drag of the device and to inhibit dunking thereof in the fluid.

Amend claim 16 as follows:

--16. (Amended) A device as claimed in claim 1, wherein the support is non-planar in cross section and adapted to include a fluid applicator engaging portion while being provided with a stirrer aperture configured to permit the fluid in the container to be stirred without removing the fluid dispenser from the container.

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Amend claim 18 as follows:

--18. (Amended) A device as claimed in claim 16, wherein the cross section is parabolic, hyperbolic, or the like.

Amend claim 19 as follows:

--19. (Amended) A device as claimed in claim 1, wherein the device is provided with a perforated floor co-operable with the support, the floor being adapted to permit engagement with a fluid applicator while permitting a desired quantity of fluid to come into contact with the applicator.

Amend claim 20 as follows:

--20. (Amended) A device as claimed in claim 1, wherein a logo or other information is provided thereon, such that when the dispenser is floating in a fluid the logo or other information is readable.

Amend claim 21 as follows:

--21. (Amended) A container for a fluent coating composition, the container including a lid and an applicator engagement device as claimed in claim 1.

Amend claim 24 as follows:

--24. (Amended) A lid for a container, the lid being provided with removable zones configured such that when the removable zones are removed the remainder of the lid forms a device as claimed in claim 1.--

Francois Jacobus ROSSOUW

R E M A R K S

The above changes in the claims merely place this national phase application in the same condition as it was during Chapter II of the international phase, with the multiple dependencies being removed. Following entry of this amendment by substitution of the pages, only claims 1-24 remain pending in this application.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

Respectfully submitted,

YOUNG & THOMPSON

By *Benoit Castel*
Benoit Castel
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745 South 23rd Street
Arlington, VA 22202
Telephone: 703/521-2297

May 4, 2001

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The claims have been amended as follows:

4. (Amended) A device as claimed in ~~any one of~~ claims 1-~~to~~-3, wherein the support is of larger cross sectional dimension than the axial length of the fluid applicator with which it is to be used, said support being adapted to float at or on the surface of the fluid with the fluid applicator engaging means at or just below the surface of the fluid.

5. (Amended) A device as claimed in ~~any one of the preceding claims~~1, wherein, in the case of the fluid applicator being a roller, the support and fluid applicator engaging means are adapted so that the roller can be rolled over at least part of the fluid applicator engaging means to bring it in contact with the fluid in the container.

6. (Amended) A device as claimed in ~~any one of the preceding claims~~1, wherein the fluid in the container is a coating composition, such as paint, and the roller picks up the paint onto its applicator surface by the action of rolling it over the fluid applicator engaging means and the fluid surface.

8. (Amended) A device as claimed in claim 6-~~or~~ claim 7, including a centre piece defining the opening and connected to the support by the arms.

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9. (Amended) A device as claimed in claim 7—or ~~claim 8~~, wherein the arms are made of a flexible material, the length of the arms determining the freedom of movement of the centre piece relative to the support.

10. (Amended) A device as claimed in ~~any one of~~ claims 7 to claim ~~9~~7, wherein the arms are made of a resiliently deformable material.

12. (Amended) A device as claimed in ~~any one of~~ claims 8 to ~~11~~, wherein the centre piece comprises the stirrer element opening.

13. (Amended) A device as claimed in ~~any one of~~ claims 7 to ~~12~~, wherein the fluid applicator engaging means is in the form of projections provided on the arms and configured to engage the fluid applicator.

14. (Amended) A device as claimed in ~~any one of~~ the preceding claims 1, wherein the support is of inverted channel-shape section to assist it to float.

15. (Amended) A device as claimed in ~~any one of~~ claims 7 to ~~14~~, wherein support and/or the arms and/or the centre piece have an axially directed lip or flange to increase the fluid drag of the device and to inhibit dunking thereof in the fluid.

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16. (Amended) A device as claimed in ~~any one of the preceding claims~~1, wherein the support is non-planar in cross section and adapted to include a fluid applicator engaging portion while being provided with a stirrer aperture configured to permit the fluid in the container to be stirred without removing the fluid dispenser from the container.

18. (Amended) A device as claimed in ~~any one of claims 16 to 17~~, wherein the cross section is parabolic, hyperbolic, or the like.

19. (Amended) A device as claimed in ~~any one of the preceding claims~~1, wherein the device is provided with a perforated floor co-operable with the support, the floor being adapted to permit engagement with a fluid applicator while permitting a desired quantity of fluid to come into contact with the applicator.

20. (Amended) A device as claimed in ~~any one of the preceding claims~~1, wherein a logo or other information is provided thereon, such that when the dispenser is floating in a fluid the logo or other information is readable.

21. (Amended) A container for a fluent coating composition, the container including a lid and an applicator engagement device as claimed in ~~any one of the preceding claims~~1.

Francois Jacobus ROSSOUW

24. (Amended) A lid for a container, the lid being provided with removable zones configured such that when the removable zones are removed the remainder of the lid forms a device as claimed in ~~any one of claims 1 to 20~~ 1.

ABSTRACT OF THE DISCLOSURE

An applicator engagement device for a fluid applicator is in the form of a float, which is adapted in use to fit within a bucket containing paint. The float, which is a plastics moulding, comprises a peripheral ring which is of inverted "U"-shape in section and faces downwardly. The ring is spanned by three equi-spaced flexible arms radiating from a central ring to join the ring at its edge, this flexibility permitting the last bit of fluid to be gotten to by the roller. The arms are narrow so that area circumscribed by the ring is substantially open to permit paint to pass therethrough. The ring is sized to permit a stirrer, such as a paddle to be inserted therethrough into the bucket to stir the paint without the need to remove the float from the bucket.

FLUID APPLICATOR ENGAGEMENT DEVICE**Field of the Invention**

5 This invention relates to a fluid applicator engagement device. In particular, the invention relates to said engagement device for an applicator for a viscous fluid coating composition, such as paint.

Background of the Invention

10 Paint and other coating compositions for application to large surface areas are normally supplied in large buckets or drums. In South Africa, typical bucket sizes in which paint is normally supplied to domestic consumers include both round and polygonal cylindrical 20 and 25 litre buckets. When 15 paint is to be applied by an applicator such as a roller, the paint is normally dispensed into a tray in which a roller surface will be brought into contact with paint and the paint is applied to the roller surface. This tray has a small capacity and must be regularly refilled. The large paint bucket, especially the twenty five litre bucket, normally has a diameter greater than the axial length 20 of the roller. Thus painters are inclined to saturate the roller directly in the bucket thereby obviating the necessity of charging and recharging the tray, and thereby also attempting to maximise the surface coverage per charge of paint on the roller. Although this technique has its advantages, a major problem arises in that the roller does not turn on its bearings when brought 25 into contact with the paint so that it does not operate satisfactorily as the roller is submerged in the paint. Furthermore, the paint needs to be stirred

periodically and thus any obstruction of the mouth of the bucket which does not permit stirring of the paint in the bucket without first removing the obstruction is undesirable.

5 Summary of the Invention

According to one aspect of the invention there is provided a fluid applicator engagement device useful for an applicator for a fluid to be applied from a container, said device having a support sized and dimensioned 10 complementarily to the container to permit axial movement of said support within the container, said device having fluid applicator engaging means cooperating with said support, said device being **characterised in that** a substantially central opening is provided to permit a stirrer element to be inserted therethrough into the container for, in use, stirring the fluid in the 15 container and also facilitating maximum fluid contact with the applicator therethrough.

The support may be of a material selected to float on the fluid in the container. Thus the axial movement of the device in the container may be 20 due to the device floating on a changing fluid level within the container.

The substantially central opening may be circular, oval, polygonal, rectangular, square, or the like.

In this specification, unless the context clearly indicates to the contrary, the terms "float", "floatable" and "floating", are to be understood as meaning that the applicator engagement device is only slightly submerged and in large lies on top of the fluid surface.

5

The support may be a support in the form of a ring.

The ring may define the periphery of the device.

10 The support may be of larger cross sectional dimension than the axial length of the fluid applicator with which it is to be used, said support being adapted to float at or on the surface of the fluid with the fluid applicator engaging means at or just above the surface of the fluid.

15 Where the fluid applicator is a roller, the support and fluid applicator engaging means are adapted so that the roller can be rolled over at least part of the fluid applicator engaging means and come in contact with the fluid in the container.

20 Typically, the fluid in the container is a coating composition, such as paint, and the roller picks up the paint onto its applicator surface or nap by the action of rolling it over the fluid applicator engaging means and bringing the applicator surface or nap into contact with the paint surface in the container.

The fluid applicator engaging means conveniently comprises spaced arms within the support, conveniently including a centre piece from which the arms radiate.

5 The arms may be made of a flexible material, the length of the arms determining the freedom of movement of the centre piece relative to the support.

The arms may be made of a resiliently deformable material.

10 The centre piece may be biased by the resiliently deformable arms into the plane of the support, or to any other required plane which determines the depth of immersion of the applicator engaging element in the fluid.

15 The centre piece may comprise the substantially central opening. Projections are preferably provided on the centre piece and/or the arms to engage the fluid applicator, where the fluid applicator is a roller, to cause it to rotate.

20 However, an upper surface of the arms may be substantially co-planar with the plane of the support.

The support may conveniently be of inverted channel-shape section to assist it to float.

The support and/or the arms and/or the centre piece may be provided with an axially directed lip or flange to increase the fluid drag of the device and to inhibit dunking thereof in the fluid.

5 The support may however be made of any material having a density lower than that of the fluid in the container, for example, wood, plastic, polyurethane foam, foam rubber, polystyrene, rubber, or the like.

10 The support is typically made of a material which has a buoyancy only slightly higher than that of the fluid.

15 The support may be made of a plastics material having a cellular nature, such that the air trapped in the cells contributes to the buoyancy thereof. The cells may be small to inhibit the entrapped air in the cells from escaping if the device is tilted at an angle to the containers longitudinal axis.

The projections may comprise elongated lugs which are upstanding above the plane of the support. Alternatively the projections may be triangular lugs, or the like.

20

In another embodiment, the support is non-planar in cross section and adapted to include a fluid applicator engaging portion while being provided with a stirrer aperture configured to permit the fluid in the container to be stirred without removing the applicator engagement device from the container.

25

Typically the support of this embodiment is dimensioned to engage the end zones of a roller fluid applicator, such as a paint roller, and to bring said applicator into contact with the fluid in the container.

5 In a typical embodiment, the cross section is arcuate, for example, parabolic, hyperbolic, or the like.

The applicator engagement device may be provided with a floor co-operable with the support, the floor being adapted to permit engagement with
10 a fluid applicator while permitting a desired quantity of fluid to come into contact with the applicator.

The device may have a logo, or other information provided thereon, such that when the applicator engagement device is floating in a fluid the logo
15 or other information may be read.

The floor may have a plurality of perforations distributed over its extent, or be in the form of a grid or an apertured screen.

20 According to a further aspect of the invention there is provided a container for a fluent coating composition, the container including a lid and an applicator engagement device substantially as described above.

25 The fluid engagement device may be integral with the lid, the lid being provided with removable zones configured such that when the removable

zones are removed the remainder of the lid forms said device in accordance with the invention.

The removable zones may have frangible borders to the remainder of
5 the lid in order to facilitate removal thereof.

Description of the Drawings

Embodiments of the invention will now be described by way of example
10 with reference to the accompanying drawings.

In the drawings:-

Figure 1 is a top plan view of an applicator engagement device of the
15 invention,

Figure 2 is a bottom plan view of the device of Figure 1,

Figure 3 is a section of Figures 1 and 2,

20

Figure 4 is a section of a further float of the invention,

Figure 5 is a plan view of Figure 4,

25

Figure 6 is a bottom plan of a float useable with the device,

Figure 7 is a section through the floor of Figure 6,

Figure 8 is a plan view of a rectangular device in accordance with the invention,

Figure 9 is schematic view of a paint roller in use with the device,

10 Figure 10 is a schematic of an applicator engagement device being
placed into a bucket.

Figure 11 is a schematic of bucket with a stirrer paddle,

Figure 12 is schematic of a roller in use in a bucket with an applicator engagement device, and

Figure 13 is a side section view of the device of Figure 8.

Referring now to Figures 1, 2, 3, 10, 11 and 12, there is provided an applicator engagement device of the invention, in the form of a float 10, which is adapted in use to fit within a bucket 12 containing paint 14.

The float 10, which is a plastics moulding, comprises a peripheral ring 16 which is of inverted "U"-shape in section and faces downwardly and has a lip 17. The ring 16 is spanned by three equi-spaced flexible arms 22 radiating

from a central engagement ring 24 to join the ring 16 at its top edge. The arms 22 are narrow so that the area circumscribed by the ring 16 is substantially open to permit paint to pass therethrough. The engagement ring 24 is sized to permit a stirrer, such as a paddle 25 to be inserted therethrough 5 into the bucket 12 to stir the paint 14 without the need to remove the float 10 from the bucket 12. The engagement ring 24 is substantially circular and is located centrally or co-axially within the ring 16.

On the engagement ring 24 there are provided roller engagement 10 projections 26. These projections 26 are elongated lugs and extend above the height of the ring 16.

The dimensions of the float 10 are such that its maximum diameter is 250 mm which is appropriate to fit into most 25 litre buckets which normally 15 have a diameter of 280 mm, or more, (i.e. there is a space between the periphery of the ring 16 and the interior of the pail contrary as shown in Figure 11). The arms 22 extend between the ring 16 and the engagement ring 24 so that the engagement ring 24 is in the same plane as the ring 16. The arms 22 are conveniently about 2 mm thick and 4 mm wide resiliently 20 deformable plastic.

The height of the projections 26 is approximately 5 mm and, standing on the engagement ring 24 gives an overall height of 15 mm.

In use, the float 10 is dropped on to the surface of the paint whereafter the paint 14 in the bucket 12 is stirred. The ring 16, and in particular the air entrapped therein, will cause the float 10 to float on the surface but with the engagement ring 24 on top of the paint. A workman can now charge or load a 5. roller 19 by running the roller over the arms 22, engagement ring 24 and/or ring 16 of the float 10. The projections 26 will engage the surface of the roller to cause it to rotate when it is moved over the arms 22, engagement ring 24 and/or ring 16. The resiliency of the arms 22 will inhibit the roller from being depressed too deeply into the paint so that only the surface of the roller will be 10 charged with paint. It will be understood of course that should the workman wish to force the float downwardly he would be able to do so, but knowing the disadvantage of so doing, he will be inhibited from so doing by the float.

The resiliency of the arms 22 also permits the last remaining paint in 15 the bucket to be used. When the bucket is substantially empty the ring 16 lies on the bottom of the bucket and when the roller is pressed onto the engagement ring 24 and the arms 22, the engagement ring 24 will be pressed into the remaining paint thereby permitting it to be picked up by the roller.

20 Reference is now made to Figures 4 and 5 which show a float 30 which is similar to float 10. However, float 30 has a supporting ring 32 having a substantially parabolic cross section 33 extending from the perimeter 34 to the central opening 36. In use, the parabolic section 33 engages the end zones of a roller thereby rotating the roller for taking up paint onto its surface.

Reference is now made to Figures 6 and 7 which show a floor 40 that is usable with float 30. The floor 40 has a perforated element 42. The floor 40 has projections 46 for engaging with a roller and drainage apertures or perforations 48 to permit paint to come into contact with the roller and to drain excess paint back again. The floor 40 has downwardly directed locating pins 43 for locating the floor 40 within float 30.

Reference is now made to Figures 8 and 13, which show a float 60 which is similar to float 30. However, float 60 has a supporting ring 62 which 10 is rectangular and having a divided central opening 64, which is divided into a larger opening 66 and a smaller opening 68 by a cross member 69 so as to permit smaller rollers to be used therewith. In use, the supporting ring 62 and cross member 69 engage the end zones of a roller thereby rotating the roller for taking up paint onto its surface.

15

The float 60, as shown in figure 13, has a wiper portion 70 extending upwardly from the supporting ring 62 in an arcuate fashion so as to facilitate wiping of excess paint of the roller prior to taking it out of the container.

20 The invention is not limited to the precise constructional details hereinbefore described and illustrated in the drawings. For example, a lifting tab may be provided to facilitate the removal of the float from the bucket.

The inventor believes that a device made in accordance with the invention as illustrated has several advantages:

- because in some embodiments the roller ends engage the device, the roller ends have less paint applied to them and thus are less likely to drip;
- because of the central opening and the equi spaced arms being quite narrow in comparison to the overall area of the device, high fluid to roller contact area is maintained in the container even when the device is floating on the surface of the fluid; and
- the resiliently deformable arms, besides permitting the last bit of fluid to be gotten to by the roller, also assist in the stirring of the fluid in the container by deforming and permitting the centre piece to be displaced during the stirring action.

AMENDED SHEETS

Claims

1. An applicator engagement device useful for an applicator for a fluid to be applied from a container, said device having a support sized and dimensioned complementarily to the container to permit axial movement of said support within the container, said device having fluid applicator engaging means co-operating with said support, said device being characterised in that said device has a substantially central opening which is more than 50% of the total area of the device to permit a predominant portion of the applicator to come in direct contact with the fluid in the container and to permit a stirrer element to be inserted therethrough into the container for, in use, stirring the fluid in the container.
2. A device as claimed in claim 1, wherein the support is of a material selected to float on the fluid in the container.
3. A device as claimed in claim 2, wherein the support is a ring which is circular, oval, polygonal, square, rectangular, trapezoidal, or the like.
4. A device as claimed in any one of claims 1 to 3, wherein the support is of larger cross sectional dimension than the axial length of the fluid applicator with which it is to be used, said support being adapted to float at or on the surface of the fluid with the fluid applicator engaging means at or just below the surface of the fluid.

5. A device as claimed in any one of the preceding claims, wherein, in the case of the fluid applicator being a roller, the support and fluid applicator engaging means are adapted so that the roller can be rolled over at least part 5 of the fluid applicator engaging means to bring it in contact with the fluid in the container.

6. A device as claimed in any one of the preceding claims, wherein the fluid in the container is a coating composition, such as paint, and the roller 10 picks up the paint onto its applicator surface by the action of rolling it over the fluid applicator engaging means and the fluid surface.

7. A device as claimed in claim 6, wherein the fluid applicator engaging means comprises spaced arms extending between the support and the 15 opening.

8. A device as claimed in claim 6 or claim 7, including a centre piece defining the opening and connected to the support by the arms.

20 9. A device as claimed in claim 7 or claim 8, wherein the arms are made of a flexible material, the length of the arms determining the freedom of movement of the centre piece relative to the support.

10. A device as claimed in any one of claims 7 to claim 9, wherein the arms 25 are made of a resiliently deformable material.

11. A device as claimed in claim 10, wherein the centre piece is biased by the resiliently deformable arms into the plane of the support, or to any other required plane which determines the depth of immersion of the fluid applicator
5 engagement means in the fluid.

12. A device as claimed in any one of claims 8 to 11, wherein the centre piece comprises the stirrer element opening.

10 13. A device as claimed in any one of claims 7 to 12, wherein the fluid applicator engaging means is in the form of projections provided on the arms and configured to engage the fluid applicator.

14. A device as claimed in any one of the preceding claims, wherein the
15 support is of inverted channel-shape section to assist it to float.

15. A device as claimed in any one of claims 7 to 14, wherein support and/or the arms and/or the centre piece have an axially directed lip or flange to increase the fluid drag of the device and to inhibit dunking thereof in the
20 fluid.

16. A device as claimed in any one of the preceding claims, wherein the support is non-planar in cross section and adapted to include a fluid applicator engaging portion while being provided with a stirrer aperture configured to 5 permit the fluid in the container to be stirred without removing the fluid dispenser from the container.

17. A device as claimed in claim 16, wherein the support is dimensioned to engage end zones of a roller fluid applicator and to bring said applicator into 10 contact with the fluid in the container.

18. A device as claimed in any one of claims 16 to 17, wherein the cross section is parabolic, hyperbolic, or the like.

15 19. A device as claimed in any one of the preceding claims, wherein the device is provided with a perforated floor co-operable with the support, the floor being adapted to permit engagement with a fluid applicator while permitting a desired quantity of fluid to come into contact with the applicator.

20 20. A device as claimed in any one of the preceding claims, wherein a logo or other information is provided thereon, such that when the dispenser is floating in a fluid the logo or other information is readable.

21. A container for a fluent coating composition, the container including a lid and an applicator engagement device as claimed in any one of the preceding claims.

5 22. A container as claimed in claim 21, wherein the device is integral with the lid, the lid being provided with removable zones configured such that when the removable zones are removed the remainder of the lid forms the device.

10 23. A container as claimed in claim 22, wherein the removable zones have frangible borders to the remainder of the lid in order to facilitate removal thereof.

15 24. A lid for a container, the lid being provided with removable zones configured such that when the removable zones are removed the remainder of the lid forms a device as claimed in any one of claims 1 to 20.

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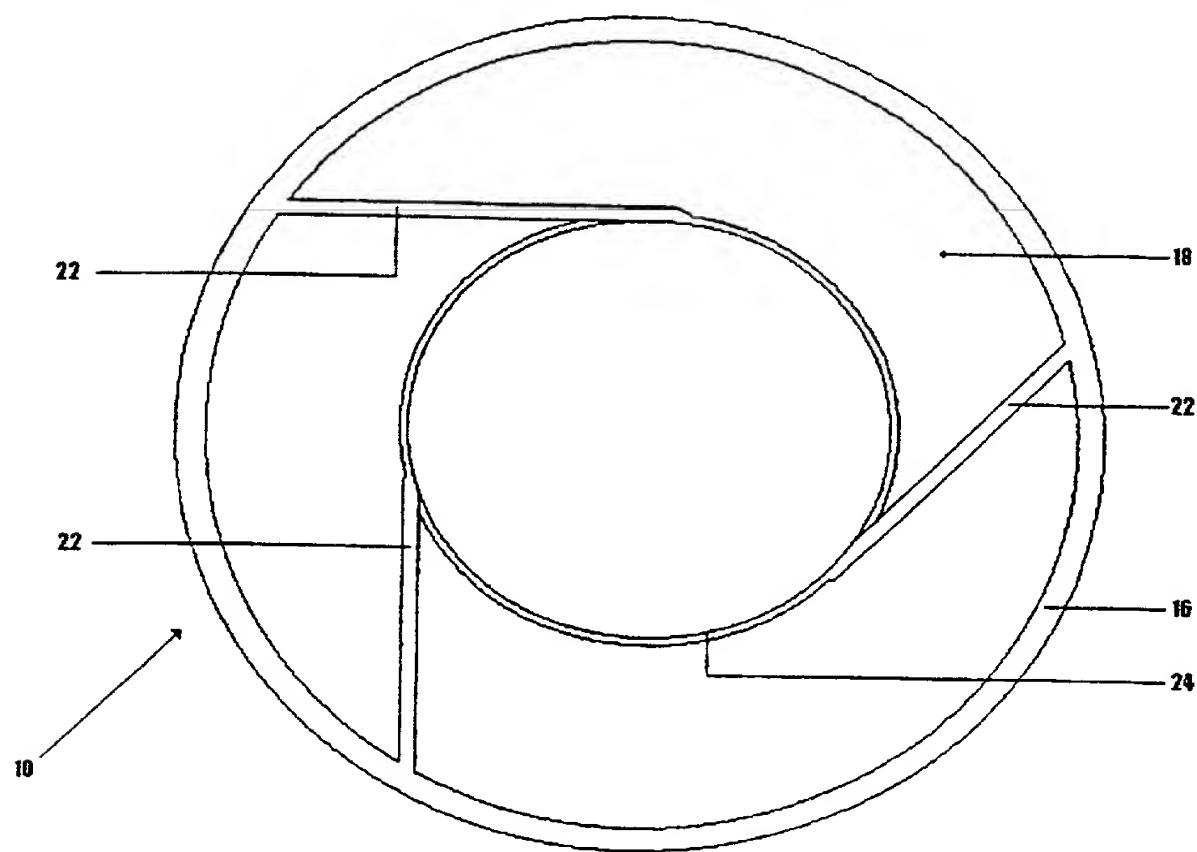


Figure 1

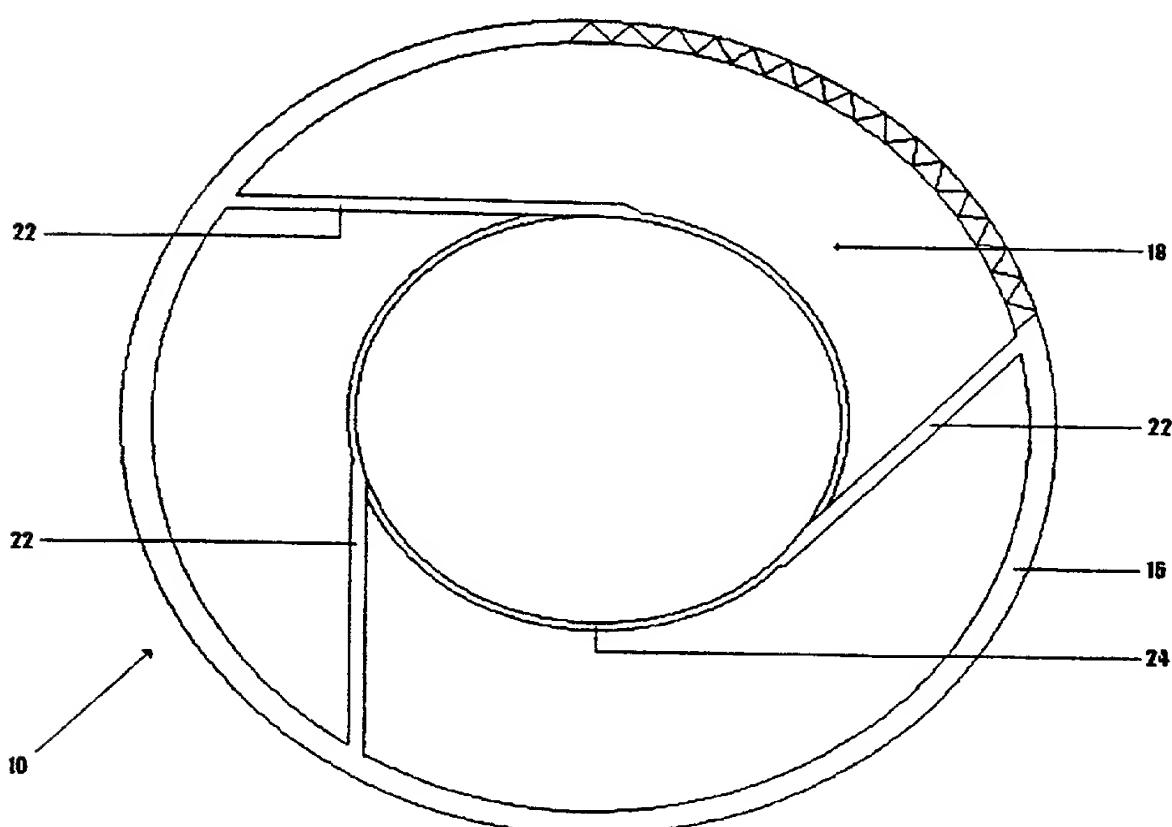


Figure 2

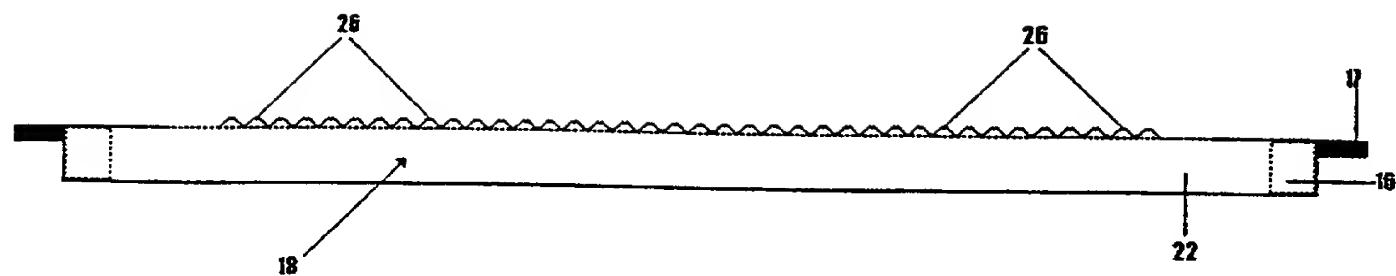


Figure 3

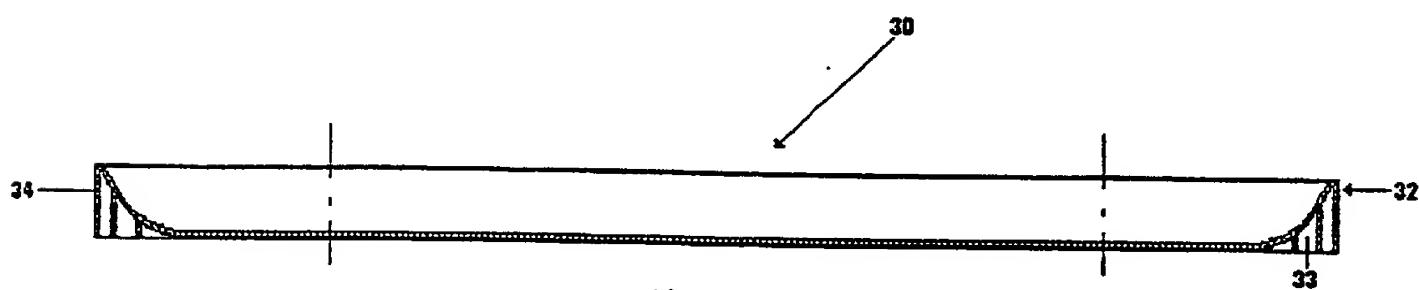


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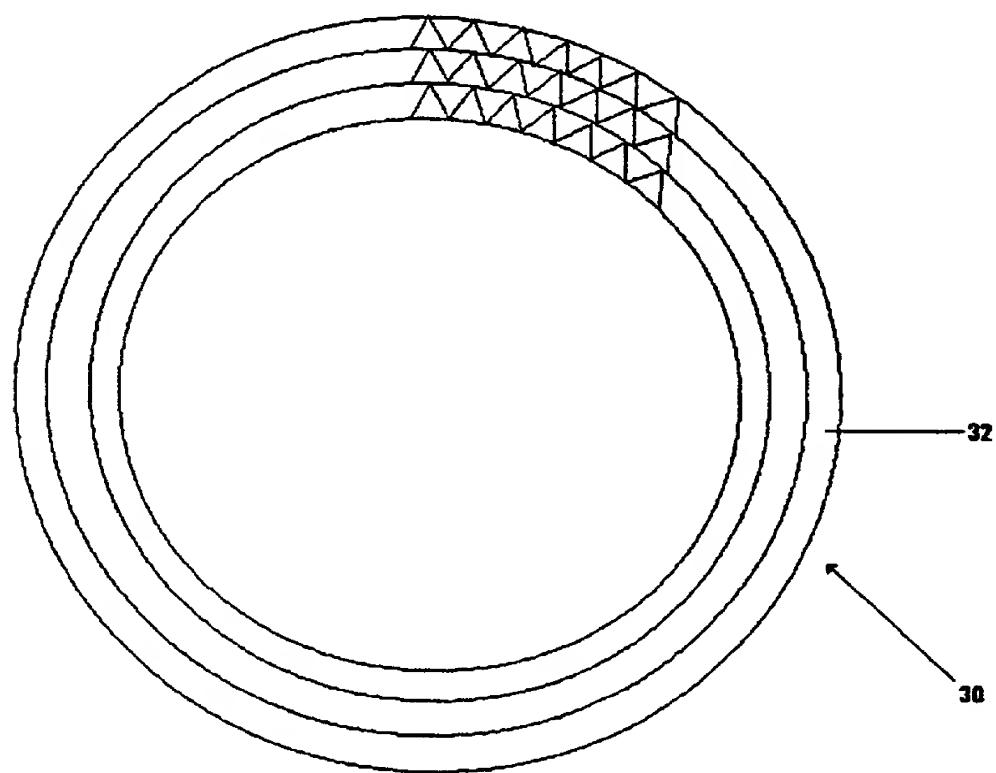


Figure 5

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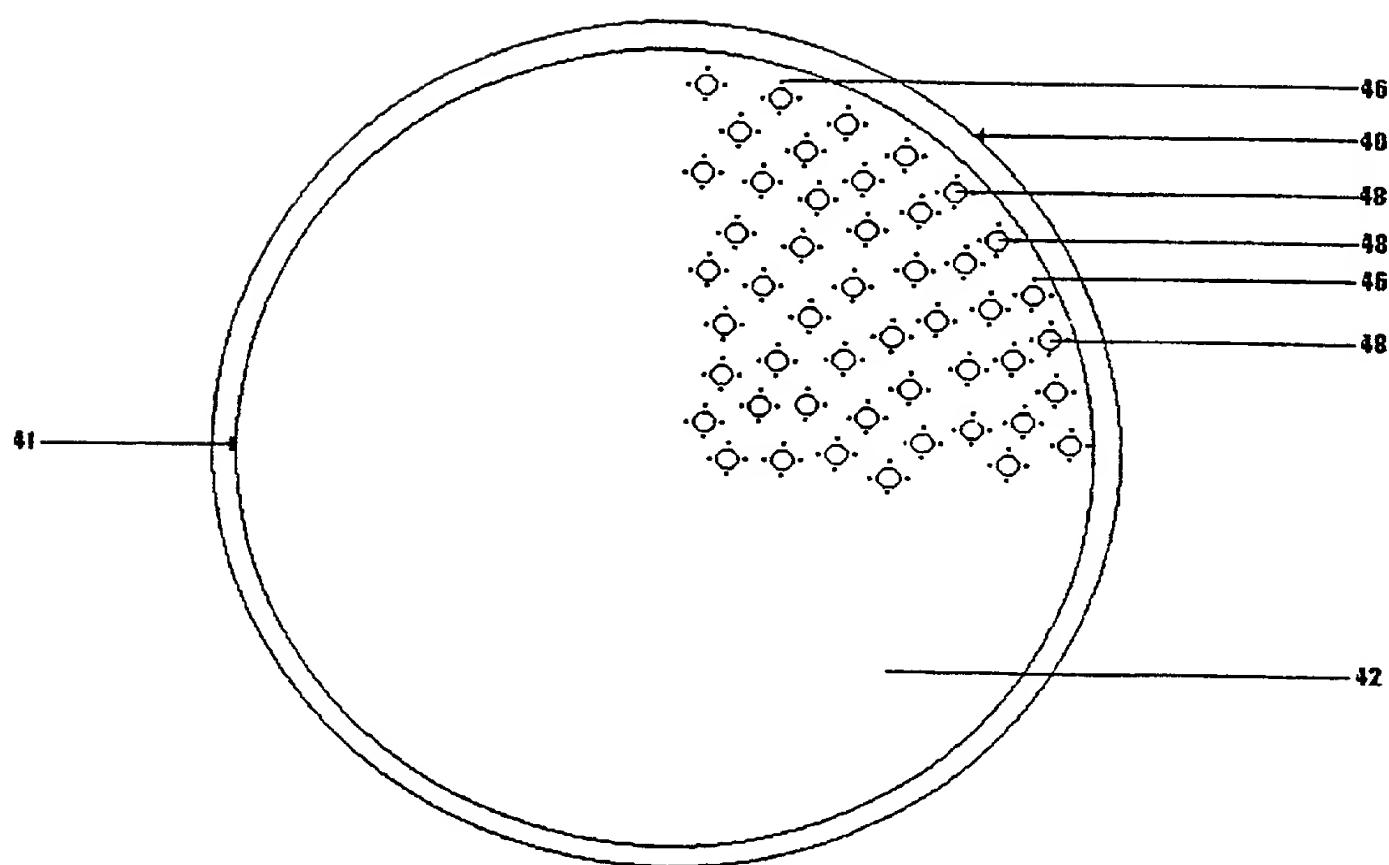


Figure 6

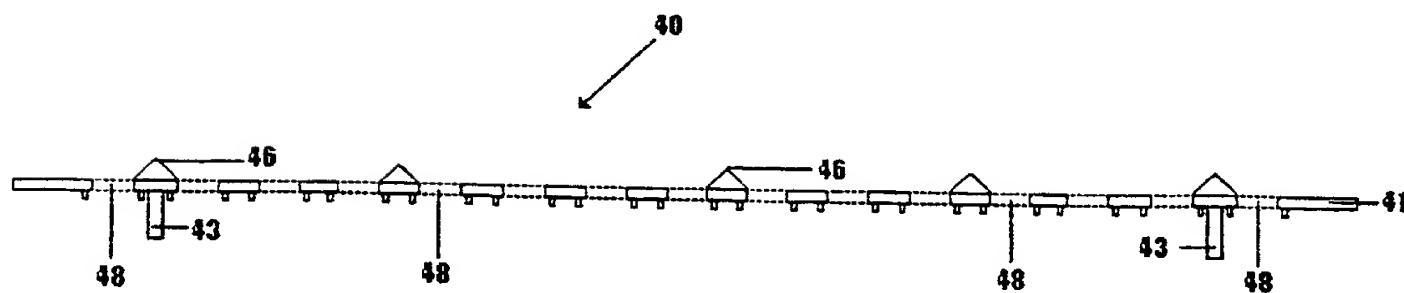


Figure 7

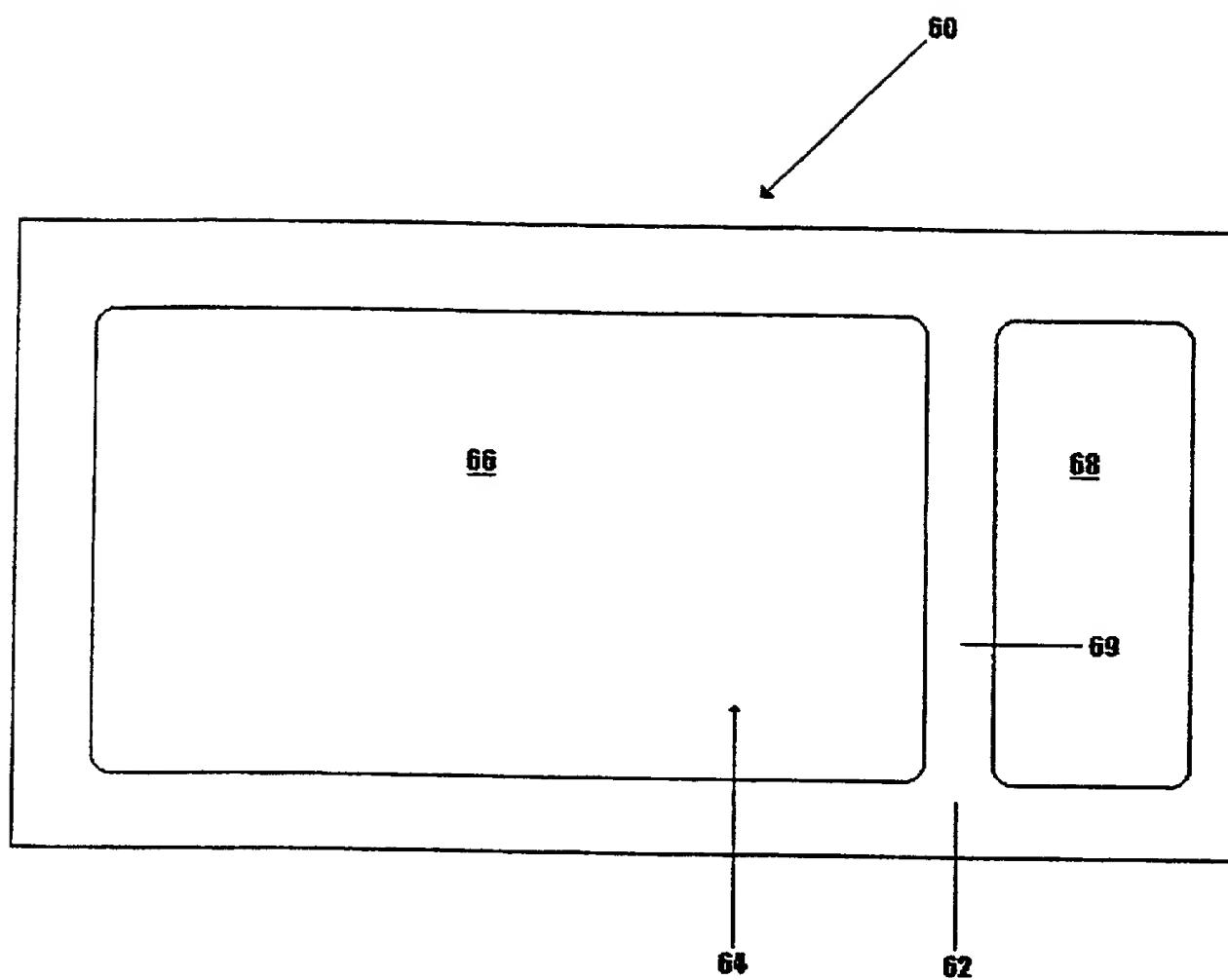


Figure 8

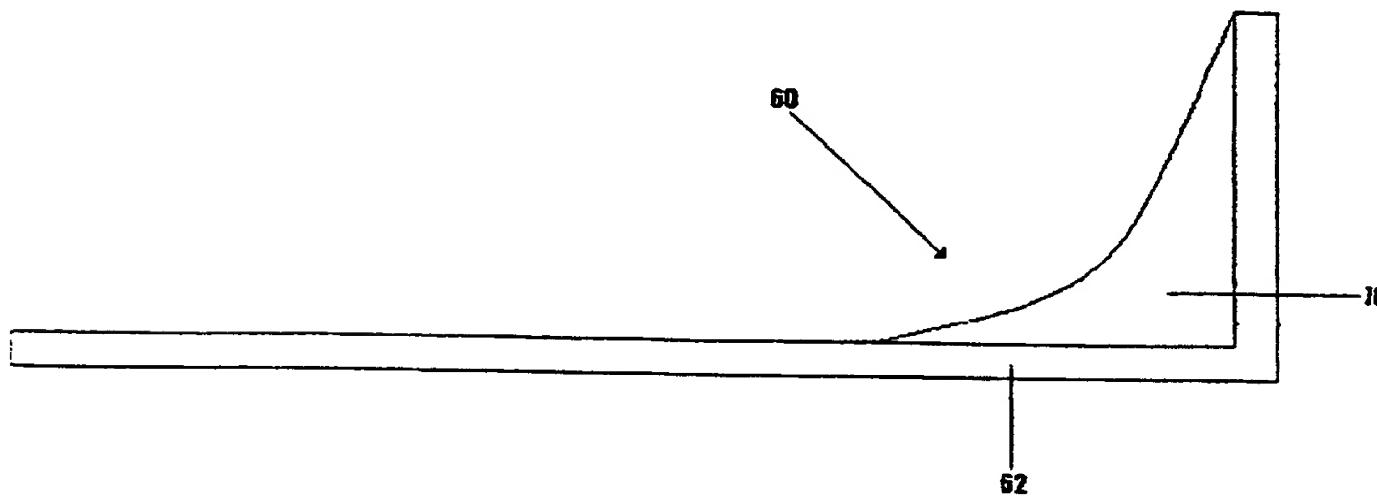


Figure 13

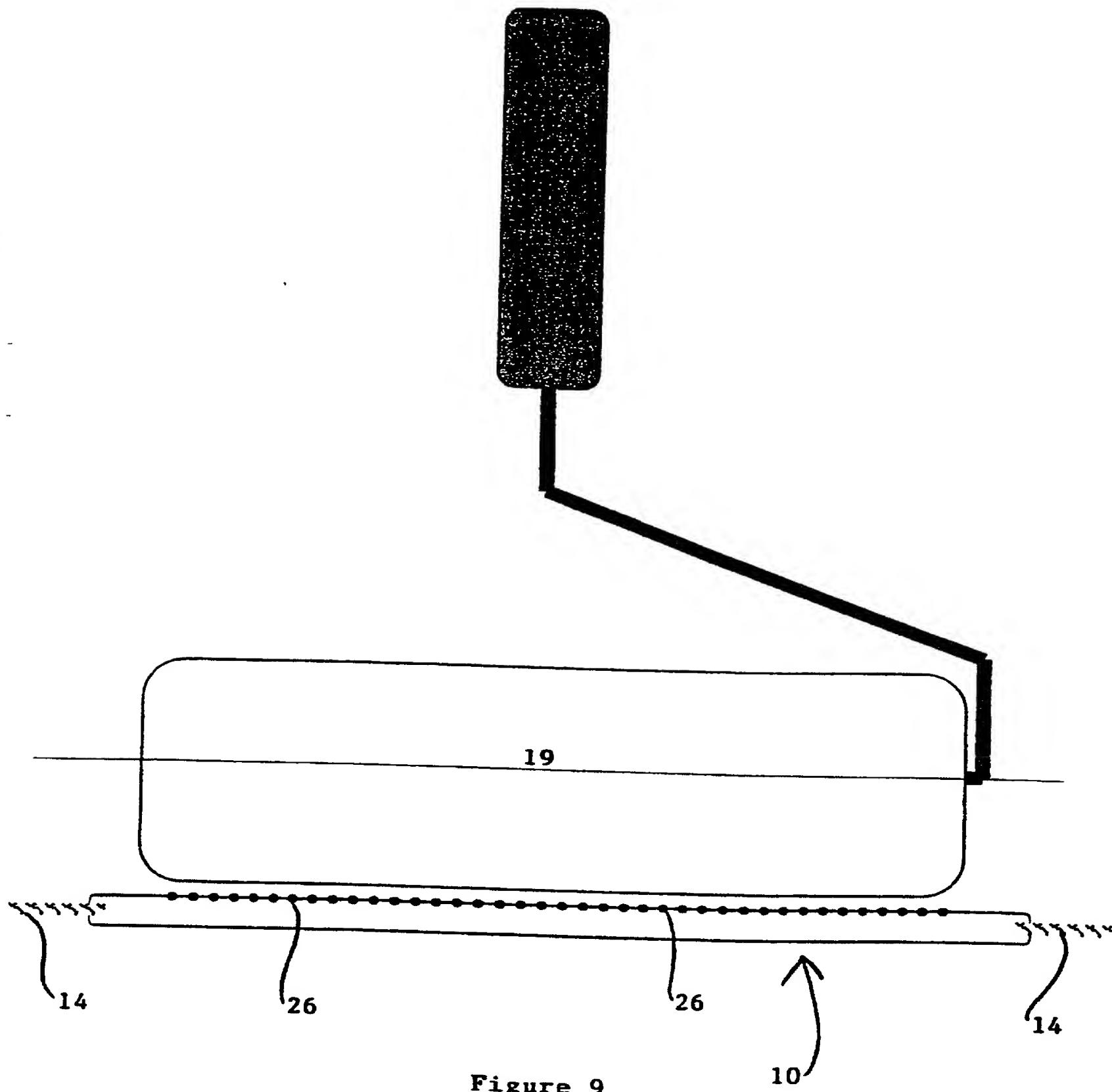
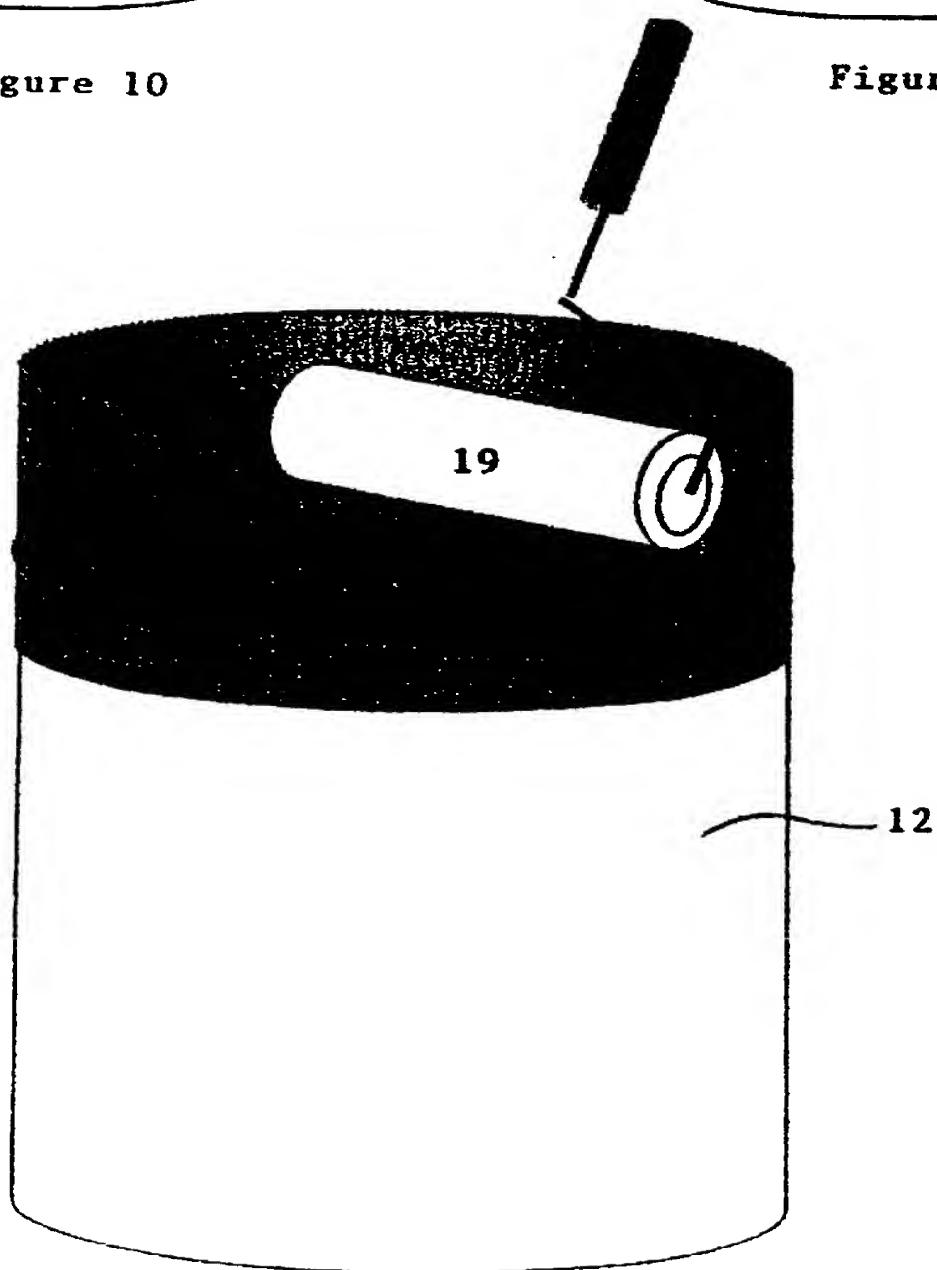
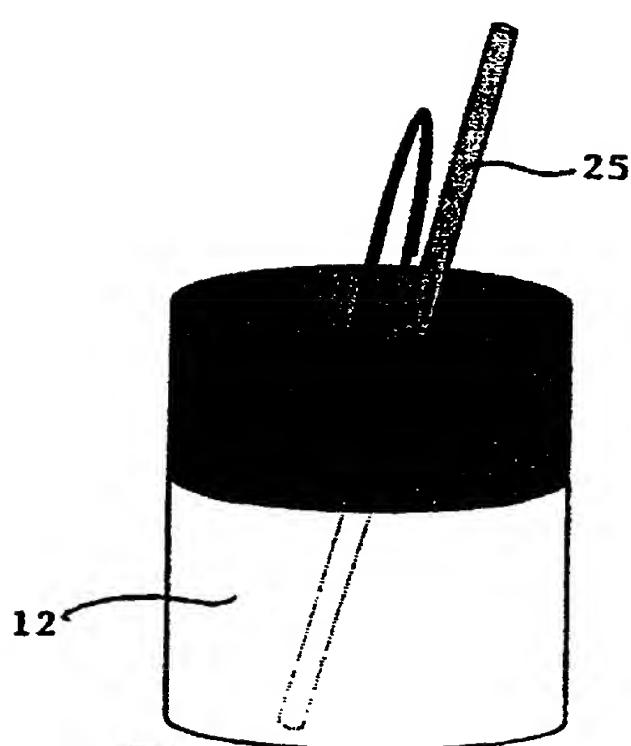
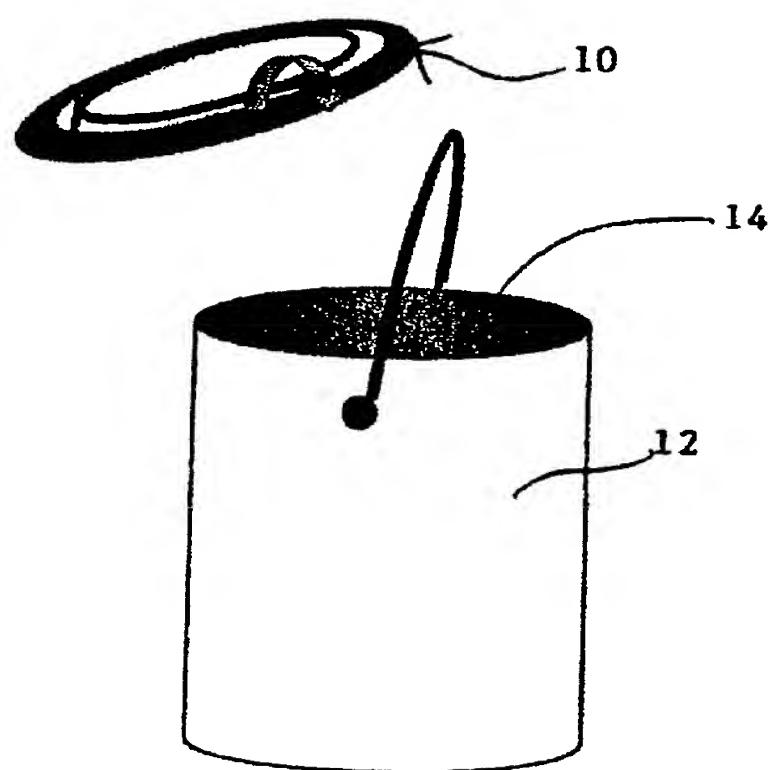


Figure 9



COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

the specification of which: *(check one)*

REGULAR OR DESIGN APPLICATION

is attached hereto.

was filed on _____ as application Serial No. _____ and was amended on _____ (if applicable).

PCT FILED APPLICATION ENTERING NATIONAL STAGE

was described and claimed in International application No. PCT-ZA99/00090 filed on 16 SEPTEMBER 1999 and as amended on _____ (if any).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

PRIORITY CLAIM

I hereby claim foreign priority benefits under 35 USC 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

PRIOR FOREIGN APPLICATION(S)

Country	Application Number	Date of Filing (day, month, year)	Priority Claimed
ZA	98/10140	4 NOVEMBER 1998	Yes
ZA	99/1818	8 MAY 1999	Yes

(Complete this part only if this is a continuing application.)

I hereby claim the benefit under 35 USC 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of 35 USC 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)

(Filing Date)

(Status--patented, pending, abandoned)

19153

POWER OF ATTORNEY

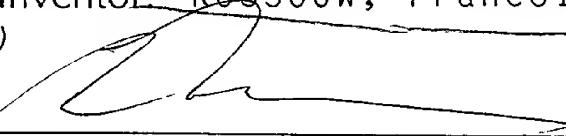
The undersigned hereby authorizes the U.S. attorney or agent named herein to accept and follow instructions from M.A. J. RADERMEYER as to any action to be taken in the Patent and Trademark Office regarding this application without direct communication between the U.S. attorney or agent and the undersigned. In the event of a change in the persons from whom instructions may be taken, the U.S. attorney or agent named herein will be so notified by the undersigned.

As a named inventor, I hereby appoint the following attorney(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: Robert J. PATCH, Reg. No. 17,355, Andrew J. PATCH, Reg. No. 32,925, Robert F. HARGEST, Reg. No. 25,590, Benoit CASTEL, Reg. No. 35,041, Eric JENSEN, Reg. No. 37,855, and Thomas W. PERKINS, Reg. No. 33,027, c/o YOUNG & THOMPSON, Second Floor, 745 South 23rd Street, Arlington, Virginia 22202.

Address all telephone calls to Young & Thompson at 703/521-2297.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Inventor's signature _____ Date _____

Residence: _____ Citizenship: _____

Post Office Address: _____

Full name of third joint inventor, if any:
(given name, family name)

Inventor's signature _____ Date _____

Residence: _____ Citizenship: _____

Post Office Address: _____